A STUDY ON VOLATILITY ANALYSIS OF SELECTED POWER SECTORS STOCKS IN NSE

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ABSTRACT

Volatility is a proportion of the pace of variances in the cost of a security after some time. It demonstrates the degree of hazard related with the value changes of a security. Financial specialists and brokers ascertain the volatility of a security to survey past varieties in the costs to foresee their future developments.

Volatility is resolved either by utilizing the standard deviation or beta. Standard deviation gauges the measure of scattering in a security's costs. Beta decides a security's volatility comparative with that of the general market. Beta can be determined utilizing relapse examination.

Keywords: security, Volatility, variances.

INTRODUCTION

Volatility is a proportion of the pace of variances in the cost of a security after some time. It demonstrates the degree of hazard related with the value changes of a security. Financial specialists and brokers ascertain the volatility of a security to survey past varieties in the costs to foresee their future developments.

It is a rate at which the cost of a security increments or diminishes for a given arrangement of profits. Volatility is estimated by computing the standard deviation of the annualized returns over a given timeframe. It demonstrates the range to which the cost of a security may increment or decline.

Volatility is resolved either by utilizing the standard deviation or beta. Standard deviation

gauges the measure of scattering in a security's costs. Beta decides a security's volatility comparative with that of the general market. Beta can be determined utilizing relapse examination.

OBJECTIVES OF THE STUDY

- To calculate the risk and returns of a selected power sector stock
- To calculate the coefficient of various power sector stock
- To study the performance of selected power sector stocks
- To suggest the investor; if provided any

NEED OF THE STUDY

- The power sector is showing signs of recovery after a few years of poor performance due to excessive supply, low prices on power exchanges, slow policy implementation and lack of power purchase agreements
- This company's core business is generating, transmitting and distributing power. Stock Broking is bullish on the stock because of the company's focus on enhancing its portfolio of non-fossil fuel based power and efforts to reduce debt.

SCOPE OF THE STUDY

The scope of the study is confirmed to 5selected power sector companies likely Adani power company, Rattan Power Company, Reliance power company, PTC company, JP Company time period of 3 months 01dec 2019 to 29feb 2020

The scope of power sector companies is never over rated. Its profound application is found in the solar photovoltaic systems, which is the need of the hour. The ever increasing demand of uninterrupted quality power, the fast depletion of the non-renewable sources of energy are the factors which force power electronics engineers to think about new ways to tackle the problems.

LIMITATION OF THE STUDY

- only 90 days have been worked on power sectors stocks
- I have study only on power sector stocks
- I have study only about 5 companies

RESEARCH METHODOLOGY

The type of research design used in the study was quantitative and analytical research. The data collected from the study are secondary data

Secondary source of data obtained from periodical journals and website nifty index contains top 5companies chosen on the basis of certain parameters set bun se and describe the volatility level of Indian capital market

The data was taken from 01/12/2019-29/02/2020 daily closing price of the nifty index. Tools are used for analysis were

- Return
- Risk
- Variance

Formulas

1. Variance=$\sum \dfrac{D^2}{n-1}$

2. Risk=$\sqrt{variance}$

3. Return=(open price-close price)/open price *100

4. $\beta = \dfrac{sum\ of\ d1*d2}{d2}$

5. Coefficient of variation= returns/ risk

REVIEW OF LITERATURE

Venkataramanaiah Malepati (2016)

To numerous among the overall population, the term volatility is just equal with chance partner with any budgetary resource. Volatility assumes an imperative job in the optional market which impacts a great deal on the venture choice. The principle goal of this investigation is to inspect the previously mentioned two parts of the volatility to check the

abundance volatility in the market. In this paper a sincere endeavor is made to know the inclination of bury and intra-day- volatility in Indian stock market concerning BSE Sensex.

Dr. T. Dulababu(2017)

The reason for this paper is to inspect the volatility in the India VIX. For this reason information for six schedule years from 2011 to 2016 is removed from www.nseindia.com and dissected year-wise, half-yearly and quarterly and tried the theories whether the fluctuation is critical among years, half-years and quarters. More variances in the markets lead to greater volatility and may give scope for good returns for the brokers. In the exploration paper, the information was investigated as far as illustrative insights and trial of speculations were performed with the assistance of Z test and ANOVA. The examination finds that there is no noteworthy contrast in the volatility among the multiyear time span and furthermore between the half years with in every year and among the quarters inside every year. This examination uncovers that volatility has been steady for the chose time of six years and inside every year again it was uniform between the first furthermore, second a half year and furthermore among the quarters. This suggests there was no degree to make large profits for file premise because of volatility.

DATA ANALYSIS AND INTERPRETATION

1. A statement showing risk and return on adani power company

Average returns=-0.1230

$$\text{Variance} = \frac{\Sigma D^2}{n-1}$$

=0.440151309

$$\text{Risk } (\sigma) = \sqrt{variance}$$

= 0.66343

Coefficient of variation= returns/ risk

=0.1854

Interpretation

From the above table it represents the risk and return of Adani Company for period of 3 months from 1-dec-2019 to 29-feb-2020 the company has a return of -0.1276, variance of 0.2841 and risk of 0.5330.

2. A statement showing risk and return on Rattan power company

Average returns=-3.9216

Variance=$\frac{\Sigma D^2}{n-1}$ =>7.3484

Risk(σ) = $\sqrt{variance}$=>2.7173

Coefficient of variation= returns/ risk=1.4431

Interpretation

From the above table it represents the risk and return of Rattan Company for period of 3 months from 1- dec-2019 to 29-feb-2020 the company has a return of --3.9216, variance of 7.3484 and risk of 2.7173.

3. A statement showing risk and return on Reliance power LTD Company

Average returns=-2.8571

Variance=$\frac{\Sigma D^2}{n-1}$ =>7.8703

Risk (σ) = $\sqrt{variance}$ =>2.8055

Coefficient of variation= returns/ risk=1.0183

Interpretation

From the above table it represents the risk and return of RelianceCompany for period of 3 months from 1-dec-2019 to 29-feb-2020 the company has a return of -2.8571, variance of 7.8703 and risk of 2.8055

4. A statement showing risk and return on PTC power LTD Company

Average returns=0.0853

Variance=$\frac{\Sigma D^2}{n-1}$ =0.1372

Risk(σ) $= \sqrt{variance}$=0.3704

Coefficient of variation= returns/ risk=0.2302

Interpretation

From the above table it represents the risk and return of PTC Company for period of 3 months from 1- dec-2019 to 29-feb-2020 the company has a return of 0.0853, variance of 0.1372and risk of 0.3704

5. A statement showing risk and return on JP power LTD Company

Average returns=0.4483

Variance=$\frac{\Sigma D^2}{n-1}$=10.9894

Risk(σ) $= \sqrt{variance}$=3.3150

Coefficient of variation= returns/ risk=0.1352

Interpretation

From the above table it represents the risk and return of JP Company for period of 3 months from 1-dec- 2019 to 29-feb-2020 the company has a return of 0.4483, variance of 10.9894and risk of 3.3150

STATEMENT SHOWING RISK RETURENS VARIATION

s no	Company Name	returns	risk	coefficientof variation
1	Adani power	0.123	0.66343	0.1854
2	Rattan Power	3.9216	2.7173	1.4431
3	Reliance Power	2.8571	2.8055	1.0183
4	PTC Power	0.0853	0.3704	0.2302
5	JP Power	0.4483	3.315	0.1352

Interpretation

From the above table it represents the risk and return andcoefficient of variation of companies for period of 3 months from 1-dec-2019 to 29-feb-2020.The adani and PTC power companies are high volatile in nature. The rattan power and reliance power are less volatile in nature.

STATEMENT SHOWING RISK

Company Name	risk
Adani power	0.66343
Rattan Power	2.7173
Reliance Power	2.8055
PTC Power	0.3704
JP Power	3.315

Interpretation

From the above table it represents the risk and return of company for period of 3 months from 1-dec-2019 to 29-feb-202.tthe adani power and ptc power companies are high risk in nature. The remaining are less risk in nature.

FINDINGS

- Adani power company- the risk and return of Adani Company for period of 3 months from 1-dec-2019 to 29-feb-2020 the company has a return of -0.1276, variance of 0.2841 and risk of 0.5330.

- Rattan power company- s the risk and return of Rattan Company for period of 3 months from 1-dec-2019 to 29-feb-2020 the company has a return of --3.9216, variance of 7.3484 and risk of 2.7173.

- Reliance power company-the risk and return of RelianceCompany for period of 3 months from 1-dec-2019 to 29-feb-2020 the company has a return of -2.8571, variance of 7.8703 and risk of 2.8055.

- PTC company: the risk and return of PTC Company for period of 3 months from 1-dec-2019 to 29-feb-2020 the company has a return of 0.0853, variance of 0.1372and

risk of 0.3704.

- JP Company-the risk and return of JP company for period of 3 months from 1-dec-2019 to 29- feb-2020. The adani power and PTC power companies are high risk in nature. The remaining are less risk in nature

SUGGESTIONS

- The best company to invest is reliance Power Company and rattan Power Company both are less volatile in nature.

- Strong and efficient power generation, transmission and distribution capacity is instrumental in the eliminating 40% economic chaos of a country. In the Indian context, however the same has been center of all controversies. Incongruent decisions in the policy definitions in mining sector and the inefficient pricing policy coupled with power theft and power loss have strongly affected the power sector. Thus, for every 100 MW of electricity generated in India, as high as 45 MW is lost because of inefficient transmission and distribution (T&D). On one hand, all central power generation companies like NTPC are highly profitable as bulk power prices are fixed by the regulator providing guaranteed return and on the other hand, most state run power distribution companies are loss-making machines as raising consumer tariffs is politically sensitive.

- The adani power, PTC power and JP company are height volatile in nature we will get loss while investing in this companies.

CONCLUSION

Volatility is defined as the standard deviation of the investment's return, whether this investment is a stock option or a project. Volatility can be modeled with the help of a computerized spreadsheet, or estimated using a variety of techniques. Monte Carlo methods can provide a sophisticated estimate of an asset's volatility. The use of a twin security to estimate volatility is widely described in the literature. These twin securities can be used to identify the implied volatility that can be used in the valuation of projects. A firm's own stock can be used as a twin security if the project mimics the company's average performance.

It has been shown in the work that the implied volatility of a stock option or an index option can make an excellent forward-looking proxy for estimating the volatility of a project, assuming that an appropriate twin security is chosen. This approach can offer added insight to the investment decision, because risk can be quantified and related to the actual volatility of real.

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